

**Model** Modelstar 200 DX  
**Make** Miller USA  
**Input Power** 3 Phase  
**Rated Input** TIG - 175 A, ac  
 17 V, 60%  
 Stick - 150 A  
 ac 35 V, 60%



**MIG Welding Machine**

**Model** MIGmatic 353  
**Make** Miller USA  
**Rated Output** 500A/250VDC,  
 50% Duty Cycle  
**Max. Open-Circuit Voltage** 31VDC



**CAM Lab.**

**EMCO Compact 5 CNC Lathe**

**Tranose**  
**EMCO** Walter & Co.  
 Austria  
**Program Memory** 310 blocks  
**Feed** 499 mm/min &  
 700 mm/min



**CNC Milling Machine**

**Model** ATC version 01  
**Make** MTAB - DENFORD  
**Max. Cross Travel** 90 mm  
**Longitudinal Travel** 170 mm  
**Head Travel** 115 mm  
**Table Surface** 360 x 100 mm



**Mechatronics Hardware & Simulation Setup**

**Model** Control X  
**Make** Cybermotion Technologies Pvt. Ltd.



motion controller

- 7 axis-6-axis
- inputs and 3 relayed outputs
- PWM signal and direction
- PID servo control loop & closed loop position control with speed control
- 312 micro seconds servo loop time



**Laser Lab.**

**NO-YAG Laser Machine**

**Model** SLP 200 ND  
**Make** Sunsh-ando  
**Power** 200 W  
**Wave Length** 1.06 μm  
**Frequency** Variable up to 50 Hz



**CAD Lab facility**

**Software facility:** Unigraphics 164, Autodesk Inventor Pro1.10, Team Center 6100, PLM & Change Mgt, Team center Engg, Unified & TC, Community Collaboration, ITI Simulation, Witness Simulation, 3D-Sim, ANSYS 10, HyperWorks & LS-DYNA, Mastercam, MISON AA, Visual Studio 2008

**Hardware Facility:** HP Desktop 607200 Computers, HP Graphics Workstations, xw4300 with networking, HP Designer 300 Plotter, HP 2400 Laser Printer



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**Facility @ Expertise**



Department of Production Engineering

**Preface by the Director**

Production Engineering Department has always been front runner in knowledge dissemination in the emerging areas of technology. It has a strong research base with able and qualified staff with high moral enthusiasm. Faculty and expertise available in the department is being presented, so that skill development and continuing education programmes appealed various modules for skill set development by using the facility shall certainly enhance employability and upgrade knowledge of profession.

**Dr. S. S. Kajale**

**About Institute**

Shri Guri Goenka Singhi Institute of Engineering and Technology, at Mandla 5026, in short is an autonomous institute set up and 100% funded by Government of Maharashtra. The institute is approved by the All India Council for Technical Education (AICTE), Government of India. The 5026 Institute of Engineering and Technology has the privilege of being one of the selected few to be offered total autonomy, academic, financial and administrative. The Institute has a three pronged agenda - teaching, research, transfer of knowledge to industry and society. Qualified and experienced teachers impart high quality education to students while encouraging them to pursue their innovative ideas by providing an environment conducive for continuous learning and development.

**About Production Engineering Department**

Our department, established in 1984 with an intake of 30 B.E. students, has grown in size and stature and offers undergraduate course of Production Engineering with an intake of 60 students and two postgraduate courses namely M. Tech. in Mechanical-CAD/CAM (Intake: 25) and Product Lifecycle Management (PLM) (Intake: 18). UG course of Production Engineering and PG course of Mechanical-CAD/CAM were first accredited in December 2003 with 'B' grade for a period of three years. And subsequently, in December 2007, continuation of accreditation was conferred for both the courses. M. Tech. (PLM) has been started in the year of 2009.

The department is well equipped with resources like highly qualified faculty and staff, well equipped laboratories and workshop, modern facilities for tool engineering and manufacturing support, state of art computational & CAD

**Departmental Strength**

Name of faculty	Qualification	Expertise / Specialisation
Dr. S.R. Kajale	Director Ph.D.	Adv. Mfg. Techniques & Micro-machining
Dr. B. M. Babade	Ph.D.	Quality Engineering, Process Modeling
Dr. V. M. Nandedkar	Ph.D.	Sheet Metal Forming
Dr. S. B. Sharma	Ph.D.	Technology Management, MCMF, Electroless Coating
Dr. V. B. Tungikar	Ph.D.	Ferrous Element Analysis, Composites
Dr. M. M. Akarte	Ph.D.	Casting, Product Lifecycle Management
Dr. J. V. L. Venkatesh	Ph.D.	Production Management, optimization
Dr. L. N. Wankhade	Ph.D.	Quality and Reliability, Information Asymmetry
Prof. M.K. Rodege	M.Tech.	Thermal Engg. CAM, MCMF
Prof. R. P. Parvekar	M.E.	CAD, Customization, Database Mgt.
Prof. N. M. Khandre	M.E.	Welding, Productivity Improvement, MCMF

**NCMP Lab.**

**EDM Wire Cut Machine**

**Model** Electronica  
**Make** Marout - 6  
**Maximum Travel Range** X Axis : 300 mm  
 Y Axis : 600 mm  
 Z Axis : 225 mm  
 U Axis : 40 mm  
 A Axis : 40 mm  
 420 x 500 x 200

**Work piece Main Table Feed Rate Resolution** 900 mm/min  
 0.001 mm

**Electrochemical Machining Setup**

**Model** EC MAC - 8  
**Make** Metatech, Pune  
**Tool Area** 300 Sq. mm  
**Head Stroke** 150 mm  
**Job Unload** Overload 300 mm




**Electric Discharge Machine (EDM)**

**Model** C3022  
**Make** Electronics  
**Work Size** 500 x 300 x 240 mm  
**Work Table** 360 x 220 mm



**Modern Manufacturing Lab.**

**CNC Milling Centre**

**Model** MINI MILL  
**Make** HAAS USA  
**Travel** XYZ - 400mm \*  
 300mm \* X

**Distance Between Spindle & Table** 100 - 350 mm  
**Rapid Feed Rate** 15 min/in  
**Spindle Speed** 0 - 18000 RPM



**Coordinate Measuring Machine**

**Model** Ruby 543  
**Make** Inspects Metrology India Pvt. Ltd.

**Measuring Range** X Axis : 600 mm,  
 Y Axis : 500 mm,  
 Z Axis : 300 mm  
 0.001 mm

**Resolution** 700 x 560 mm  
**Work Table Size** Reinshaw any combination  
**Probing System**



**2D Height Master**

**Model** Optima Plus 600  
**Make** Inspects Metrology India Pvt. Ltd.  
**Range** Measuring: 600 mm  
 Extensible: 950 mm  
**Resolution** 0.0025 mm  
**Probing Force** 1.0 N + 0.2 N - 0.0 N

**Rapid Prototyping**

**Make** CX - 24, Roland DC Corporation  
**Dimensions** 55.3" (W) X 12.3" (D) X 8.25" (H)  
**Features** method: Mendota

